

IN THE CLAIMS

Please amend Claims 1, 2, 6, 10 and 11, to read as follows.

1. (Currently Amended) A piezoelectric structure comprising:
a vibrational plate; and
a piezoelectric film,
said vibrational plate including a layer of a monocrystal material or a layer of a monocrystal material containing an element which is different from an element constituting the monocrystal material, ~~and~~ said vibrational plate being sandwiched by oxide layers, and said vibrational plate having a film thickness D1, where $100\text{ nm} \leq D1 \leq 10\text{ }\mu\text{m}$, and
said piezoelectric film having a single orientation crystal or monocrystal structure.
2. (Currently Amended) A piezoelectric structure according to Claim 1, wherein ~~[[a]]~~ the film thickness D1 of said vibrational plate and film thicknesses d1, d2 of said oxide layers satisfy $d1+d2 \leq D1$.
3. (Previously Presented) A piezoelectric structure according to Claim 2, wherein a film thickness D2 of said piezoelectric film satisfies $d1+d2+D1 \leq 5 \times D2$.
4. (Previously Presented) A piezoelectric structure according to Claim 1, wherein a composition of said piezoelectric film is one of PZT, PMN, PNN, PSN, PMN-PT,

PNN-PT, PSN-PT, and PZN-PT, and said piezoelectric film has a single layer structure or a laminated structure of different compositions.

5. (Previously Presented) A piezoelectric structure according to Claim 1, wherein said oxide layers comprise at least one of SiO₂, YSZ, Al₂O₃, LaAlO₃, Ir₂O₃, MgO, SRO, and STO.

6. (Withdrawn-Currently Amended) A manufacturing method for manufacturing a piezoelectric structure having a vibrational plate and a piezoelectric film, said method comprising:

a step of forming a second oxide layer on a silicon substrate, the silicon substrate having a monocrystal silicon layer on a silicon layer with an oxide layer interposed therebetween;

a step of forming a piezoelectric film of a single orientation crystal or monocrystal structure on the second oxide layer; and

a step of forming an upper electrode on the piezoelectric film.

7. (Previously Presented) A liquid ejecting head comprising:

a main assembly substrate portion having a pressure chamber in fluid communication with a liquid ejection outlet; and

a piezoelectric structure provided for said pressure chamber,

said piezoelectric structure including:

a vibrational plate; and

a piezoelectric film,

said vibrational plate including a layer of a monocrystal material or a layer of a monocrystal material containing an element which is different from an element constituting the monocrystal material, and said vibrational plate being sandwiched by oxide layers, and

said piezoelectric film having a single orientation crystal or monocrystal structure.

8. (Previously Presented) A liquid ejecting head according to Claim 7, wherein a film thickness D1 of said vibrational plate and film thicknesses d1, d2 of said oxide layers satisfy $d1+d2 \leq D1$.

9. (Previously Presented) A liquid ejecting head according to Claim 8, wherein a film thickness D2 of said piezoelectric film satisfies $d1+d2+D1 \leq 5 \times D2$.

10. (Currently Amended) A liquid ejection head according to Claim [[6]] 7, wherein a composition of said piezoelectric film is one of PZT, PMN, PNN, PSN, PMN-PT, PNN-PT, PSN-PT, and PZN-PT, and said piezoelectric film has a single layer structure or a laminated structure of different compositions.

11. (Currently Amended) A liquid ejection head according to Claim [[6]] 7, wherein said oxide layers comprise at least one of SiO₂, YSZ, Al₂O₃, LaAlO₃, Ir₂O₃, MgO, SRO,

and STO.

12. (Withdrawn) A manufacturing method for a liquid ejecting head including a liquid ejection outlet, a main body substrate portion having a pressure chamber in fluid communication with the liquid ejection outlet and having an opening, and a piezoelectric structure connected so as to plug the opening, said manufacturing method comprising:

a step of forming a second oxide layer on a silicon substrate, the silicon substrate having a monocrystal silicon layer on a silicon layer with an oxide layer interposed therebetween;

a step of forming a piezoelectric film of a single orientation crystal or monocrystal structure on the second oxide layer;

a step of separating the piezoelectric film into a plurality of portions;

a step of forming an upper electrode on the piezoelectric film; and

a step of forming the pressure chamber.